FIG.1

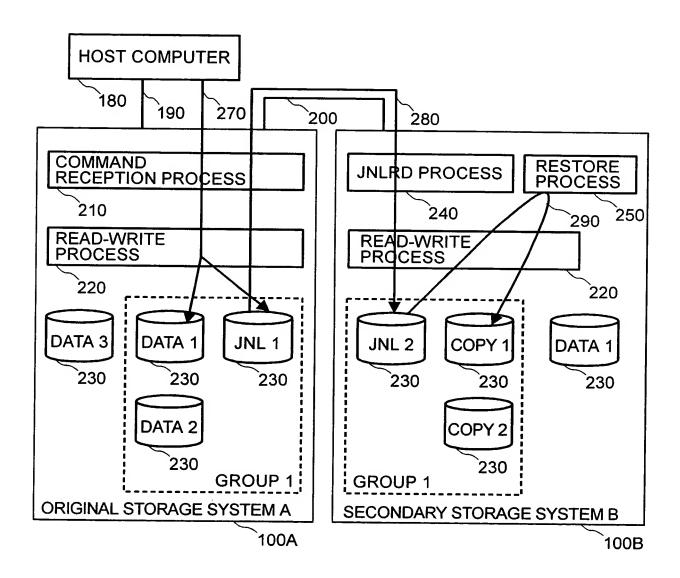
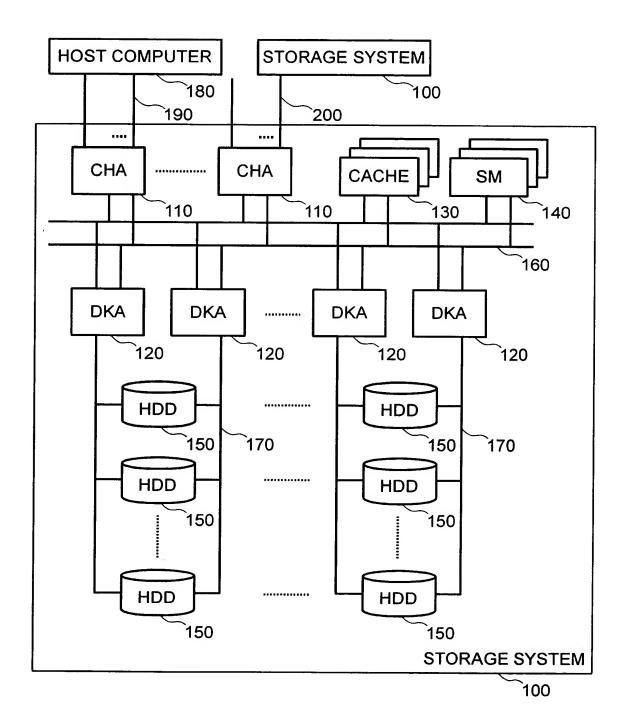
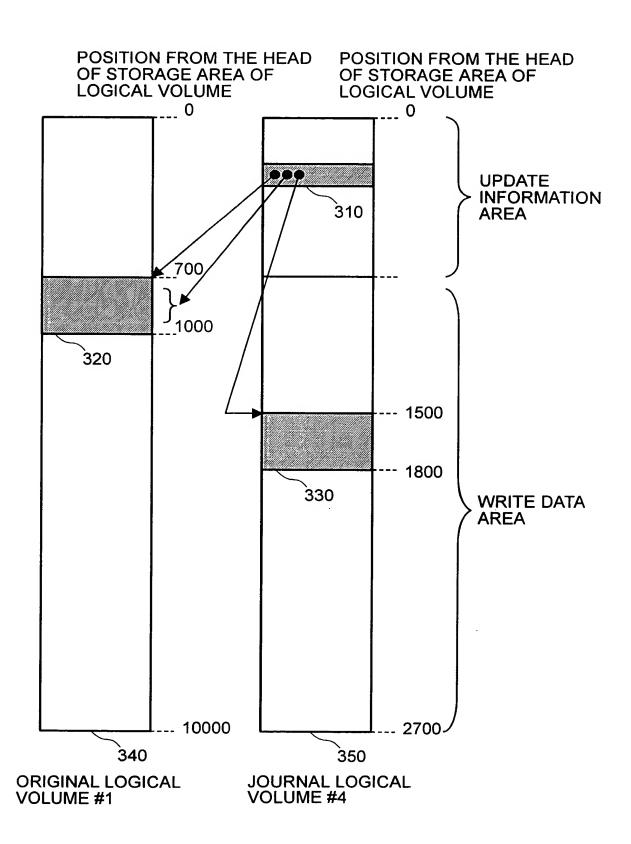


FIG.2



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FIG.3



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LOGICAL	VOLUME	FORMAT	FORMAT CAPACITY PAIR	PAIR	PHYSICAL ADDRESS	SS
VOLUME	STATE			NUMBER	STORAGE DEVICE NUMBER	POSITION FROM THE HEAD
-	ORIGINAL	VAL OPEN3	3	1	-	
2	ORIGINAL	OPEN6	9	2	-	3
3	BLANK	OPEN6	9	0	_	6
4	NORMAL	OPEN9	6	0	2	0
5	NORMAL	OPEN3	3	0	2	6
9	BLANK	OPEN6	9	0	2	12

400 VOLUME INFORMATION

		_		,	
COPY COMPLETE ADDRESS	0	0	0	0	0
GROUP NUMBER	1	_	0	0	0
SECOND LOGICAL VOLUME NUMBER	_	3	0	0	0
SECOND STORAGE SYSTEM NUMBER	2	2	0	0	0
ORIGINAL LOGICAL VOLUME NUMBER	-	2	0	0	0
ORIGINAL STORAGE SYSTEM NUMBER	1	1	0	0	0
PAIR STATE	NORMAL	NORMAL	BLANK	BLANK	BLANK
PAIR NUMBER STATE	1	2	3	4	5

500 PAIR INFORMATION

GROUP NUMBER	GROUP STATE	PAIR SET	JOURNAL LOGICAL VOLUME NUMBER	UPDATE NUMBER
-	NORMAL	1,2	4	
2	BLANK	0	0	0

600 GROUP INFORMATION

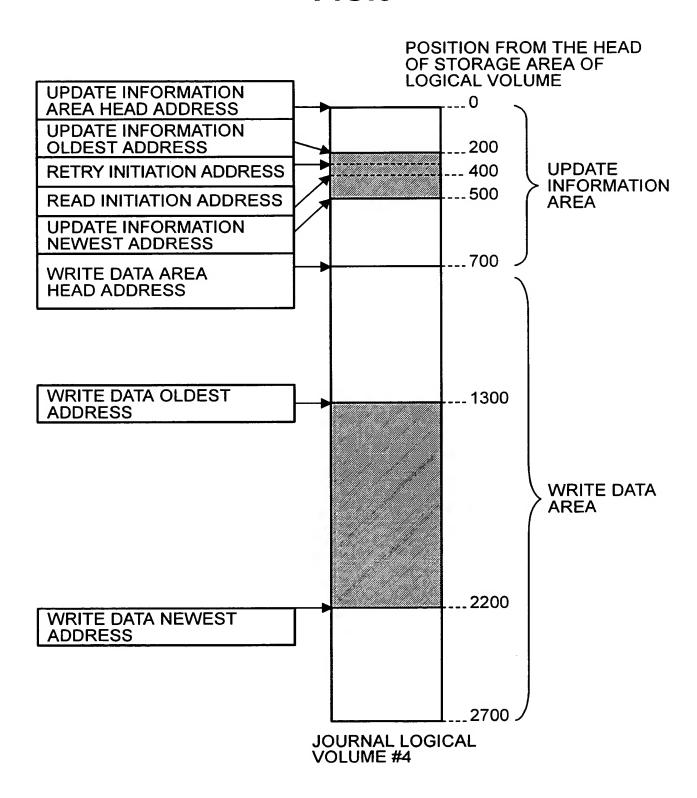
Steve Y. Cho, Reg. No. 44,612, (650) 326-2400
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	LOGICAL ADDRESS	
	LOGICAL VOLUME NUMBER	LOGICAL VOLUME POSITION FROM THE HEAD OF NUMBER STORAGE AREA OF LOGICAL VOLUME
UPDATE INFORMATION AREA HEAD ADDRESS	4	0
WRITE DATA AREA HEAD ADDRESS	4	700
UPDATE INFORMATION NEWEST ADDRESS	4	200
UPDATE INFORMATION OLDEST ADDRESS	4	200
WRITE DATA NEWEST ADDRESS	4	2200
WRITE DATA OLDEST ADDRESS	4	1300
READ INITIATION ADDRESS	4	400
RETRY INITIATION ADDRESS	4	300

700 POINTER INFORMATION

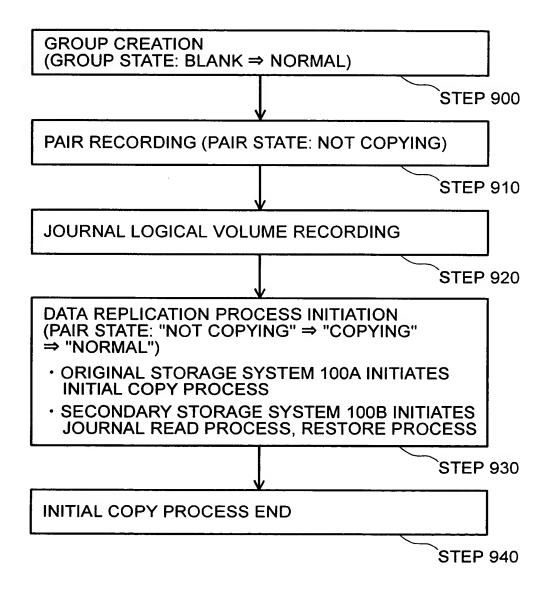
Steve Y. Cho, Reg. No. 44,612, (650) 326-2400 Titled: Storage System Inventor(s): Yusuke Hirakawa, et al. Filed: August 27, 2003 Dckt. No. 16869P-090100US Sheet 6 of 21

FIG.8



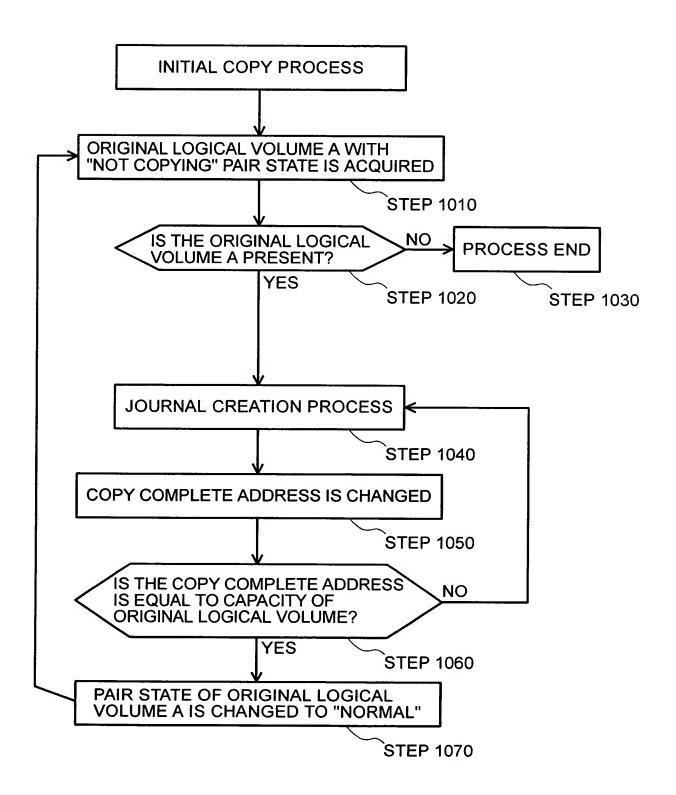
Steve Y. Cho, Reg. No. 44,612, (650) 326-2400
Titled: Storage System
Inventor(s): Yusuke Hirakawa, et al.
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FIG.9



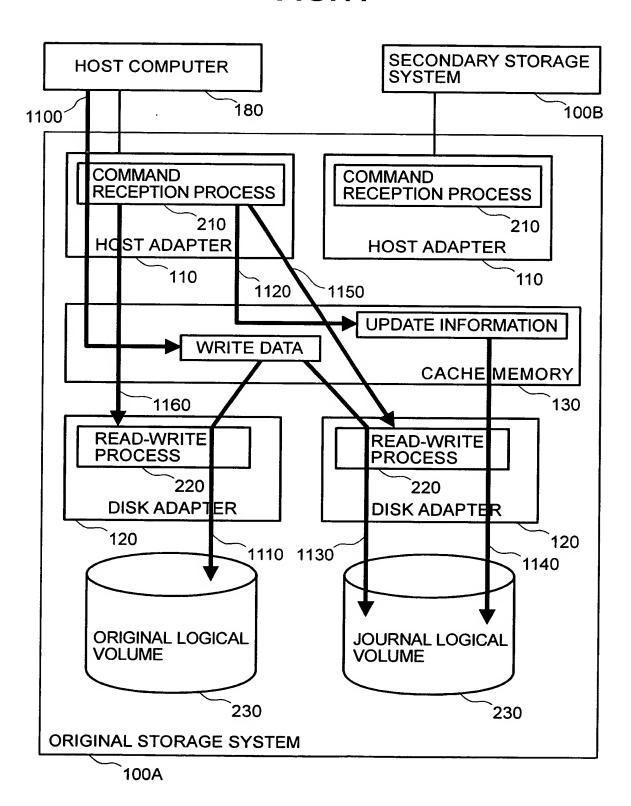
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FIG.10



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FIG.11

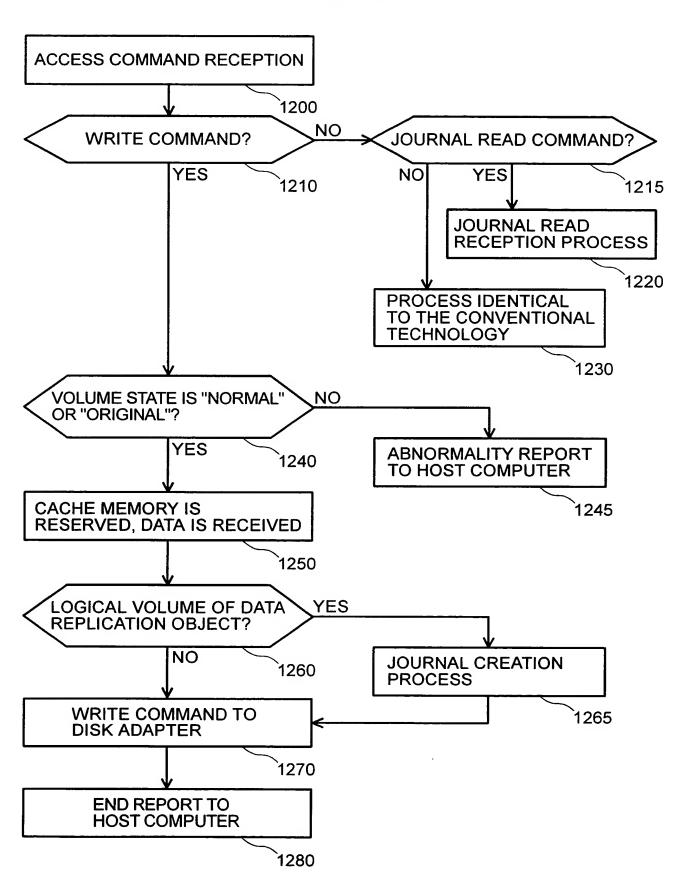


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FIG.12



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FIG.13

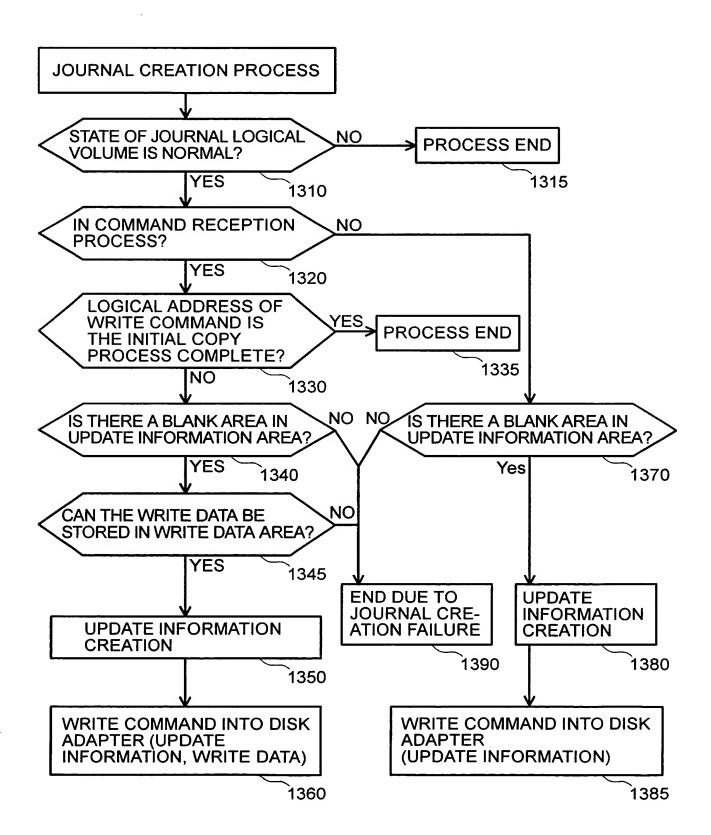
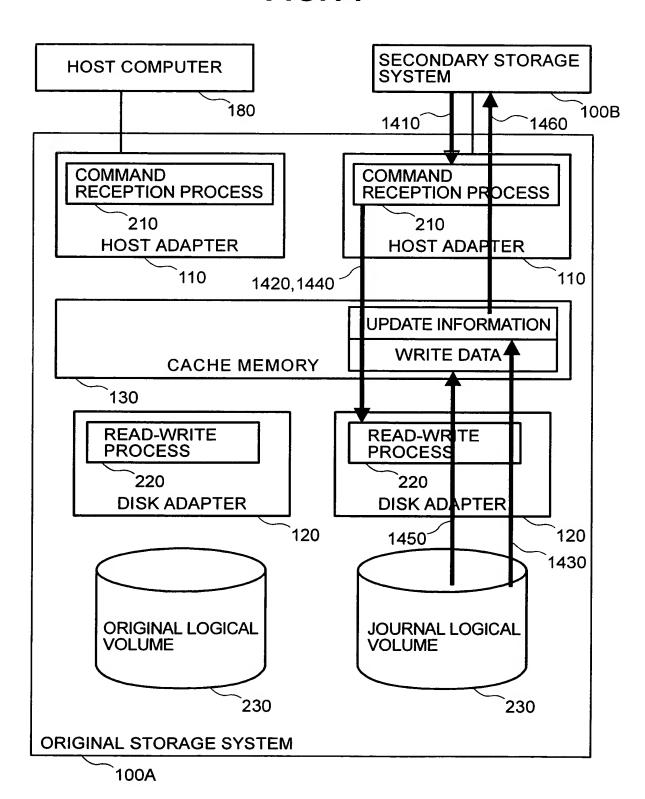


FIG.14



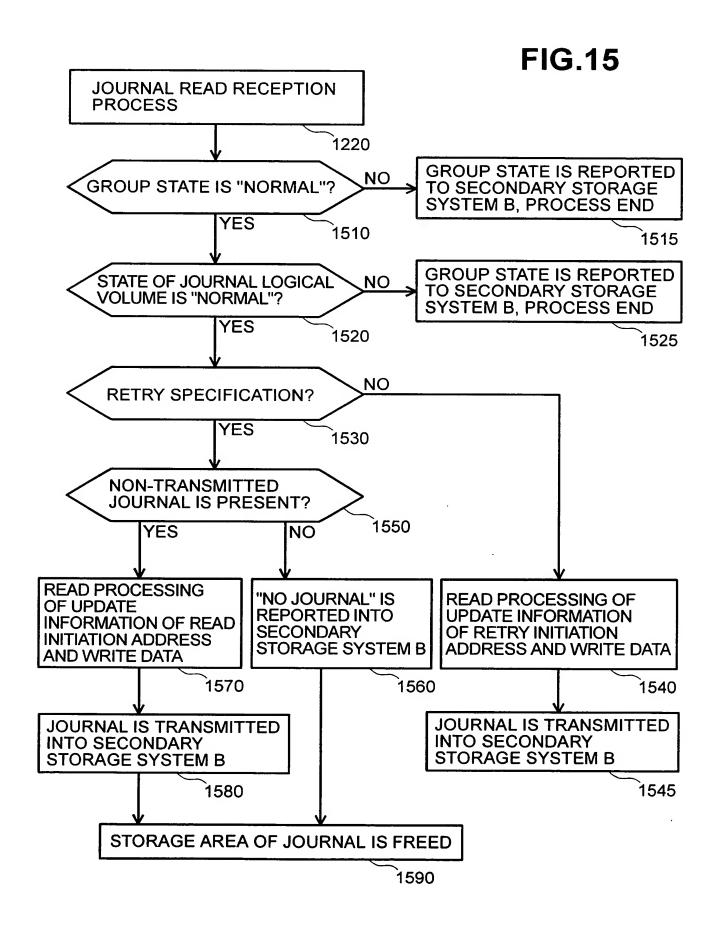
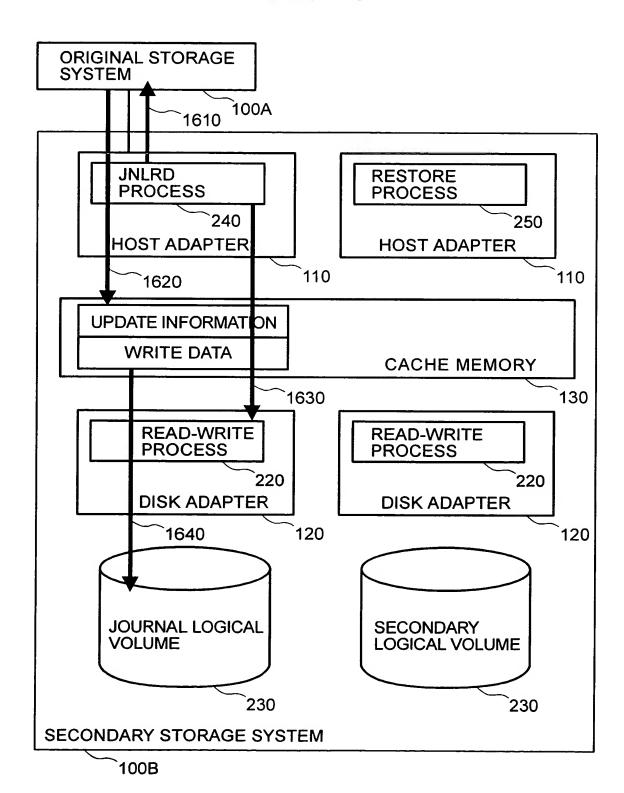
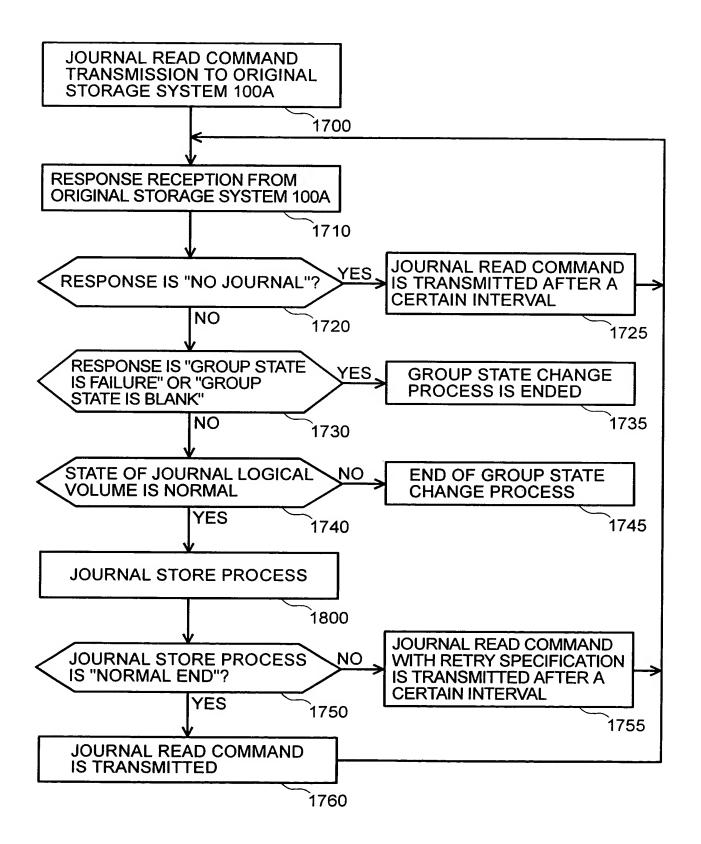


FIG.16



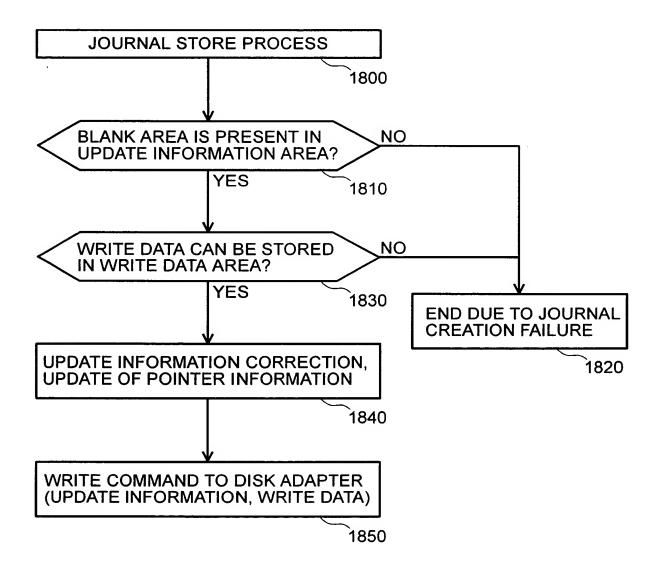
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FIG.17



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FIG.18



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FIG.19

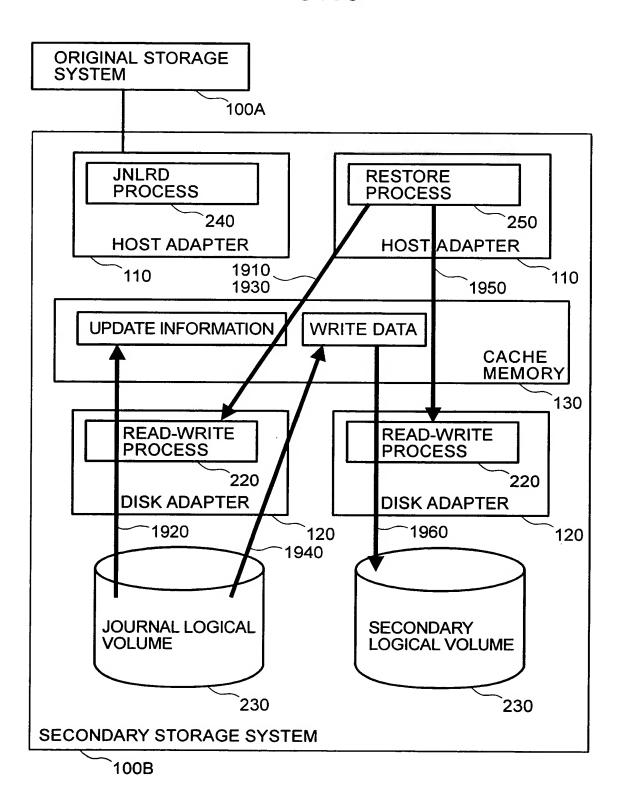
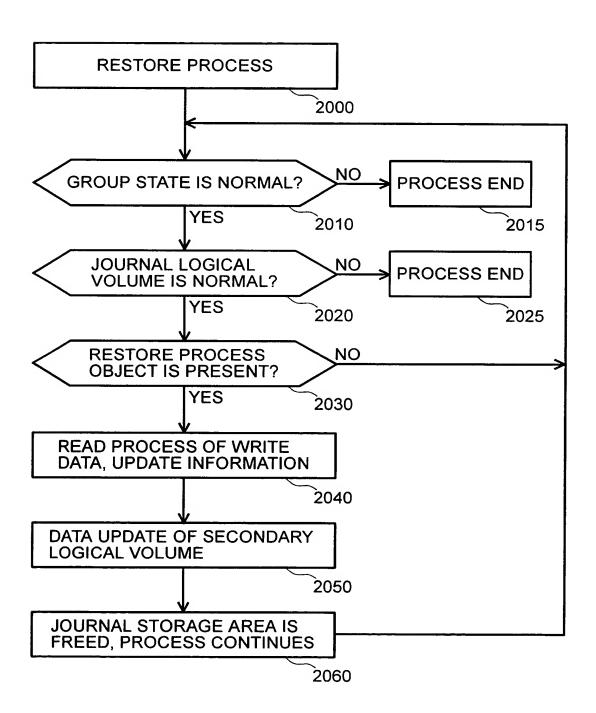


FIG.20



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Titled: Storage System
Inventor(s): Yusuke Hirakawa, et al.
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SETTING ITEM	EXAMPLE OF SET VALUE
INSTANT OF TIME AT WHICH WRITE COMMAND WAS RECEIVED	3/17/1999, 22:20:10
GROUP NUMBER	
UPDATE NUMBER	4
LOGICAL ADDRESS OF WRITE COMMAND	LOGICAL VOLUME NUMBER: 1
	POSITION FROM HEAD OF STORAGE AREA OF
	LOGICAL VOLUME: 100
DATA SIZE OF WRITE DATA	300
LOGICAL ADDRESS OF JOURNAL LOGICAL	OF JOURNAL LOGICAL POSITION FROM LEAD OF STORAGE ABEA OF
VOLUME STORING THE WRITE DATA	LOGICAL VOLUME: 1500

310 UPDATE INFORMATION

SETTING ITEM	EXAMPLE OF SET VALUE
INSTANT OF TIME AT WHICH WRITE COMMAND WAS RECEIVED	3/17/1999, 22:20:10
GROUP NUMBER	
UPDATE NUMBER	4
LOGICAL ADDRESS OF WRITE COMMAND	LOGICAL VOLUME NUMBER: 1
	POSITION FROM HEAD OF STORAGE AREA OF LOGICAL VOLUME: 800
DATA SIZE OF WRITE DATA	100
LOGICAL ADDRESS OF JOURNAL LOGICAL VOLUME NUMBER: 4 VOLUME STORING THE WRITE DATA LOGICAL VOLUME: 2200	LOGICAL VOLUME NUMBER: 4 POSITION FROM HEAD OF STORAGE AREA OF LOGICAL VOLUME: 2200

FIG.23

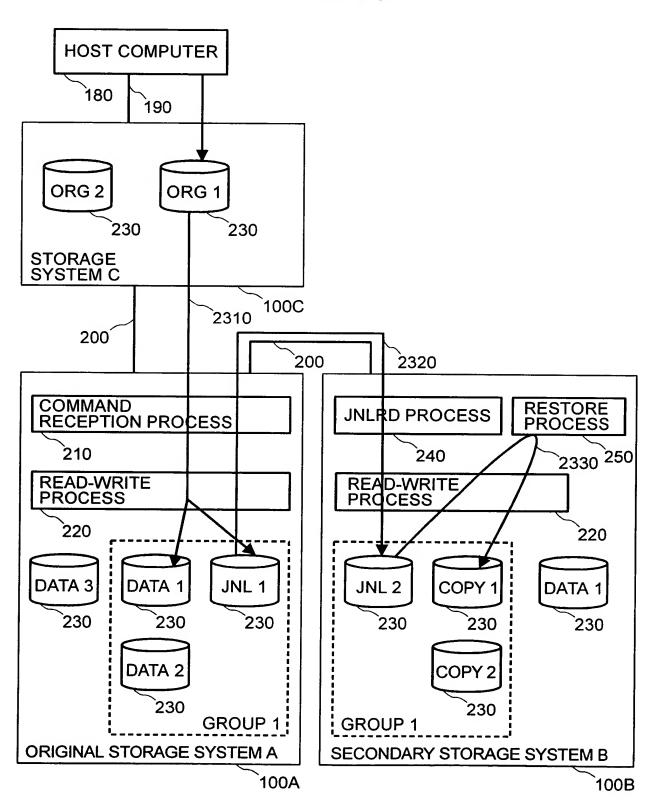


FIG.24

